

WHAT IS CLAIMED IS:

1. A method of discriminating types of plural discs with different track pitches and/or different reflection factors and/or different cover layer thicknesses, the disks being seated on an information recording and reproducing system that records and reproduces information using different wavelengths, comprising the steps of:

5 a) irradiating laser light with a specific wavelength onto an optical disk;

10 b) detecting light, which can be obtained by irradiating the laser light onto the optical disk, using a first detecting element suitable for light with the specific wavelength and/or for specific track pitch;

15 c) detecting light, which can be obtained by irradiating the laser light onto the optical disk, using a second detecting element suitable for light with another wavelength and/or for another track pitch; and

20 d) discriminating a type of optical disk on the basis of detection results obtained at the steps b) and c).

2. A method of discriminating types of disks seated on an information recording and reproducing system using a S-curve indicated by a focus error signal generated during movement of an object lens by a lens drive system, comprising the steps of:

25 storing and maintaining a signal level of a S-curve generated by feedback light which is emitted from a light source installed for a first optical disk and received by a light receiving element installed for a second optical disk; and

30 utilizing the signal level for discrimination of the types of disks.

3. An apparatus for discriminating types of disks seated on an information recording and reproducing system that records and reproduces information using different plural wavelengths, comprising:

at least two detecting elements having different detection sensitivities and/or different track pitches; and

a discriminating unit for discriminating the types of optical disks on the basis of detection results which can be obtained by detecting light received from each of the optical disks through the detecting elements.

4. An apparatus for discriminating types of disks seated on an information recording and reproducing system using a S-curve indicated by a focus error signal generated during movement of an object lens by a lens drive system, comprising:

optical disk discriminating means for storing and maintaining a signal level of a S-curve generated by feedback light which is emitted from a light source installed for a first optical disk and received by a light receiving element installed for a second optical disk, and utilizing the signal level for discrimination of the types of disks.

5. The optical disk discriminating apparatus according to claim 4, wherein the optical disk discriminating means comprises a comparing circuit for discriminating a type of seated optical disk by comparing a voltage level indicated by the S-curve of the focus error signal with a voltage level generated by the feedback light, and/or comparing the voltage level

generated by the feedback light with a reference value obtained when a suitable optical disk is seated.